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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,422	07/17/2003	Kimitaka Watanabe	1419.1076	9618

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STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

ROY, SIKHA

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/620,422

Applicant(s)

WATANABE ET AL.

Examiner

Sikha Roy

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>0405,0605,0705</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

The Amendment, filed on July 28, 2005 has been entered and is acknowledged by the Examiner.

New claims 7-30 have been entered.

The terminal disclaimer filed on July 28, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent Applications 10/624,682 and 10/637,574 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6,21-28 rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication 2005/0152125 to Fukuda.

Regarding claim 1 Fukuda discloses (Figs. 1,2 sections [0052],[0053]) an electroluminescent light emitting device 1 comprising an EL light emitting sheet 26 with electroluminescence light emitting elements, electrode section 20 comprising an electrode pair 16,18 which are disposed with predetermined arrangement a waterproof

layer 30 and a light reflecting layer 28. Fukuda discloses the waterproof layer 30 is disposed on the side of the electrode section facing the light-emitting layer 26 and the light reflecting layer 28 is disposed on the one surface side of the light-emitting layer.

Fukuda further discloses wherein each of the electrode pairs includes first and second electrodes electrically separated from each other with a spacing region  $W_k$  and disposed in one surface side (underneath) of the light emitting layer, an electrically conductive material 11 is placed on the other surface side of the light emitting layer. Fukuda further discloses when an AC voltage is applied from a voltage application unit (an AC power source) between the first and second electrodes, portion of the light emitting layer corresponding to the placed electrically conductive material emits light. Fukuda discloses ([0082]) the width of the spacing  $W_k$  region 0.3 –1.0 mm and the width dimension of each tooth of the first and second electrodes  $W_e$  is selected within a range of about .1 –5.0 mm which cover the claimed ranges of values.

Regarding claim 2 Fukuda discloses the electrically conductive material is attachable onto and detachable from (removed by wiping) from the other surface side of the light emitting layer.

Regarding claims 3,4 Fukuda discloses the electrode section comprising plurality of electrode pairs 16k and 18k.

Claim 5 essentially recites the same limitation for an electroluminescent light emitting sheet as of claim 1 and hence is rejected for the same reason. Fukuda further discloses (Fig. 2) the waterproof layer 30 is disposed on the side of the electrode

section facing the light-emitting layer 26 and the light reflecting layer 28 is disposed on the one surface side of the light-emitting layer.

Regarding claim 6 Fukuda discloses the electrically conductive material is attachable onto and detachable from (removed by wiping) from the other surface side of the light emitting layer.

Regarding claims 21 and 22 Fukuda discloses (section [0068]) the light reflecting layer 28 has thickness of 10-30  $\mu\text{m}$ .

Regarding claims 23 and 24 Fukuda discloses (section [0068]) the light reflecting layer has a withstanding voltage of about 200-300V.

Regarding claims 25 and 26 Fukuda discloses (section [0068]) the light reflecting layer has a dielectric constant of about 30-100.

Regarding claims 27 and 28 Fukuda discloses (section [0063]) the waterproof layer is formed of resin selected from the group comprising fluorocarbon, silicon, urethane.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2005/0152125 to Fukuda, and further in view of JP 2001337633 to Hiroki et al.

Regarding claim 7 Fukuda does not exemplify the display system comprising a control unit which controls a plurality of light emitting modes different from one another in the light emitting system by controlling execution of voltage application to the electrode pair.

Hiroki in analogous art of display unit discloses (English translation sections [0007]) the display device having plurality of light emitting parts, each having pair of electrodes formed with a printed circuit and a control unit for energizing each electrode pair. Hiroki further discloses ([0010], [0011],[0022],[0023]) that voltage application between the pair of electrodes is controlled such that light is emitted in sequential flash, blinking and other different modes and thus outstanding display (light of firefly flying about a shooting star) can be formed effectively and cheaply.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to include a control unit as taught by Hiroki in the display system of Fukuda for controlling light emitting modes and thus providing an effective and cheap outstanding display.

Claim 8 recites the same limitations as of claim 7 and hence is rejected for the same reason. Additionally Fukuda discloses plurality of electrode pairs disposed in a predetermined arrangement in the display.

Regarding claim 9 Hiroki discloses the display system further comprises a selection section (microcomputer with a program drive) for selecting one from plurality of light-emitting modes and the control unit controls the application of voltage to the first and second electrodes accordingly.

Regarding claim 10 Hiroki discloses (section [0011]) the light emitting modes include sequential flash about two or more light-emitting parts and also making it blink simultaneously for expressing a motion and these modes are provided by controlling application of voltage to the electrode pairs in a predetermined order.

Claims 11-14 essentially recites the same limitations as of claims 7-10 respectively and hence are rejected for the same reasons (see rejections of claims 7-10).

Claims 15,16 and 18,19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2005/0152125 to Fukuda, and further in view of U.S. Patent 4,686,110 to Endo.

Regarding claims 15 and 16 Fukuda fails to exemplify the electrode section being 300-1000°A (claim 15) or 400-800°A thick.

Endo teaches that it is known in the art to provide EL devices with electrodes having thickness of 100-800°A.

Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to provide the first and second electrode section of Fukuda having thickness of about 400-800°A since where the general conditions of a claim are disclosed in the prior art discovering optimum or workable ranges involves only routine skill in the art (MPEP §2144.05).

Claims 18 and 19 recite the same limitations of claims 15 and 16 respectively and hence are rejected for the same reason.

Claims 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2005/0152125 to Fukuda, and further in view of JP 63276892 to Toyoda et al.

Regarding claims 17 and 20 Fukuda fails to disclose the light emitting layer comprising color pigment.

Toyoda in same field of endeavor discloses (see English abstract) light emitting layer comprising dispersed color pigments. Toyoda discloses this provides the phosphor grains in EL layer providing electroluminescence of specified color.

Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to include color pigments in the EL layer of Fukuda as taught by Toyoda for providing electroluminescence of specific color.

Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2005/0152125 to Fukuda, and further in view of U.S. Patent Application Publication 2004/0041516 to Watanabe et al.



Regarding claim 29 Fukuda does not disclose the waterproof layer comprising a coloring pigment.

Watanabe in same field of endeavor discloses (section [0161]) an EL display device with waterproof layer comprising color pigments. Watanabe discloses the color pigments makes the electrode pattern invisible from the front side and thus provides excellent display design.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to have the waterproof layer of Fukuda comprising color pigments as suggested by Watanabe for providing excellent display without the visibility of electrode pattern.

Claim 30 essentially recites the same limitation as of claim 29 and hence is rejected for the same reason.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*S. R.*

Sikha Roy  
Patent Examiner  
Art Unit 2879

*Karabi Guhany*